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Subject: Nearest Neighbour / "Sparse" Comparison

Hi Silicon people!

Here is an update of a little study in progress to begin to examine the physics ramifications of running in "Sparse" mode. I re-ran clustering over a jet sample given me by Matt H, with the following switches:

To emulate sparse mode:

```
PhiClusParam
  lowThresh set 4

  1stripThresh
    peakThresh set 4
    sideThresh set 4
  exit

  2stripThresh
    peakThresh set 4
    sideThresh set 4
  exit

  3stripThresh
    peakThresh set 4
    sideThresh set 4
  exit
exit
```

The noise distribution for this data seems to peak at about 2.5 for layers<6, and so this setting of 4 corresponds to and absolute ADC count of about 10 (pretty conservative).

The attached plots show the d0 distribution for OIZ tracks and the pull distributions both for Nearest neighbour mode and "Sparse".

There doesn't appear to be all that much difference.

I'm going to have more of a play with the siHitAnalyzer ntuple next week...unless Ried beats me to it :)

cheers

Mat